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MAMMALS FROM BRITISH HONDURAS, MEXICO, JAMAICA AND HAITI

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Substantial advances in our knowledge of the fauna of the Caribbean area are direct results of studies and collections made by Ivan T. Sanderson, capably assisted by his wife, Alma. With financial support from the Percy Sladen Memorial Fund administered by the Linnaean Society of London, and with the co-operation of the British Museum, the Sandersons sailed for the West Indies in July, 1939. Their collections and observations of animals began in Jamaica. Some bats, to mention only mammals, were taken here. In early September the party moved to Haiti, where more bats and a feral horse were secured. Later in the same month, work was continued in Belize, British Honduras. The next six months were devoted to studies covering the coast of British Honduras from Punta Gorda in the south to the Bahía de Chetumal on the northern border. The specimens preserved include the largest and most representative collection ever made of the mammals of British Honduras. Unfortunately, the rodents, held for shipment after the war, were destroyed by a hurricane. In March, 1940, the Sandersons crossed over into Mexico, continuing their studies in Quintana Roo, Yucatan, and Chiapas until October of the same year.

An interesting and popular account of the scientific journey was published by Mr. Sanderson under the title *Living Treasure* (Viking Press, New York, 1941). Thus, the author's description of the countries and his notes on ecological relationships, habits and methods of capture of animals are preserved in a manner useful to the professional, clear to the amateur, and delightful, diverting and instructive to all. Mr. Sanderson's original drawings represent the animals in an animated style combining charm with accuracy. Page references to accounts and figures of mammals in *Living Treasure* are included in the synonymies of the species in the follow-

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ing report. The amphibians and reptiles collected and described by the Sandersons have been classified by Schmidt (1941).

Previous knowledge of the mammals of British Honduras was almost entirely restricted to material gathered by Adolph Murie and his party in Belize and in El Cayo and Mountain Pine Ridge in western British Honduras. Of 51 kinds of mammals recorded by Murie (1935), approximately 150 specimens representing 26 forms were taken in British Honduras alone.

The Sandersons preserved and entered in their field catalogue a total of 683 mammals from the Caribbean area and 336 specimens reached Chicago Natural History Museum for deposit until they could be safely transshipped to England. In the meantime permission was granted by the authorities of the British Museum (Natural History) for the preparation and publication of this report. The generosity of that institution in permitting Chicago Natural History Museum to retain a selection of 72 mammals from the Sanderson collection is gratefully acknowledged. These specimens are indicated by the abbreviation C.N.H.M. preceding the collector's numbers in the lists of specimens collected. Specimens now in the possession of the British Museum (Natural History) are identified by the abbreviation B.M.

Collecting localities in British Honduras are shown on the map (fig. 127). A selection of recent publications dealing with mammals of Yucatan, British Honduras, and other Central American countries is appended.

***Didelphis marsupialis californica* Bennett**

Didelphis californica Bennett, 1833, Proc. Zool. Soc. London, p. 40.

Didelphis marsupialis Allen (nec Linnaeus), 1901, Bull. Amer. Mus. Nat. Hist., 14: 166—synonymy.

Did[elphis] mes-americana Allen (ex Oken), 1902, Bull. Amer. Mus. Nat. Hist., 16: 251, 256.

Didelphis marsupialis texensis Allen, 1901, Bull. Amer. Mus. Nat. Hist., 14: 172—type locality, Brownsville, Texas.

Didelphis marsupialis tabascensis Allen, 1901, Bull. Amer. Mus. Nat. Hist., 14: 173—type locality, Teapa, Tabasco, Mexico.

Didelphis richmondi Allen, 1901, Bull. Amer. Mus. Nat. Hist., 14: 175—type locality, Greytown, Nicaragua.

Didelphis yucatanensis Allen, 1901, Bull. Amer. Mus. Nat. Hist., 14: 178—type locality, Chichén Itzá, Yucatan, Mexico.

Didelphis yucatanensis cozumelae Merriam, 1901, Proc. Biol. Soc. Washington, 14: 101—type locality, Isla de Cozumel, Yucatan, Mexico.

Didelphis marsupialis Sanderson, 1941, Living Treasure, pp. 103, 184, 208, 235.

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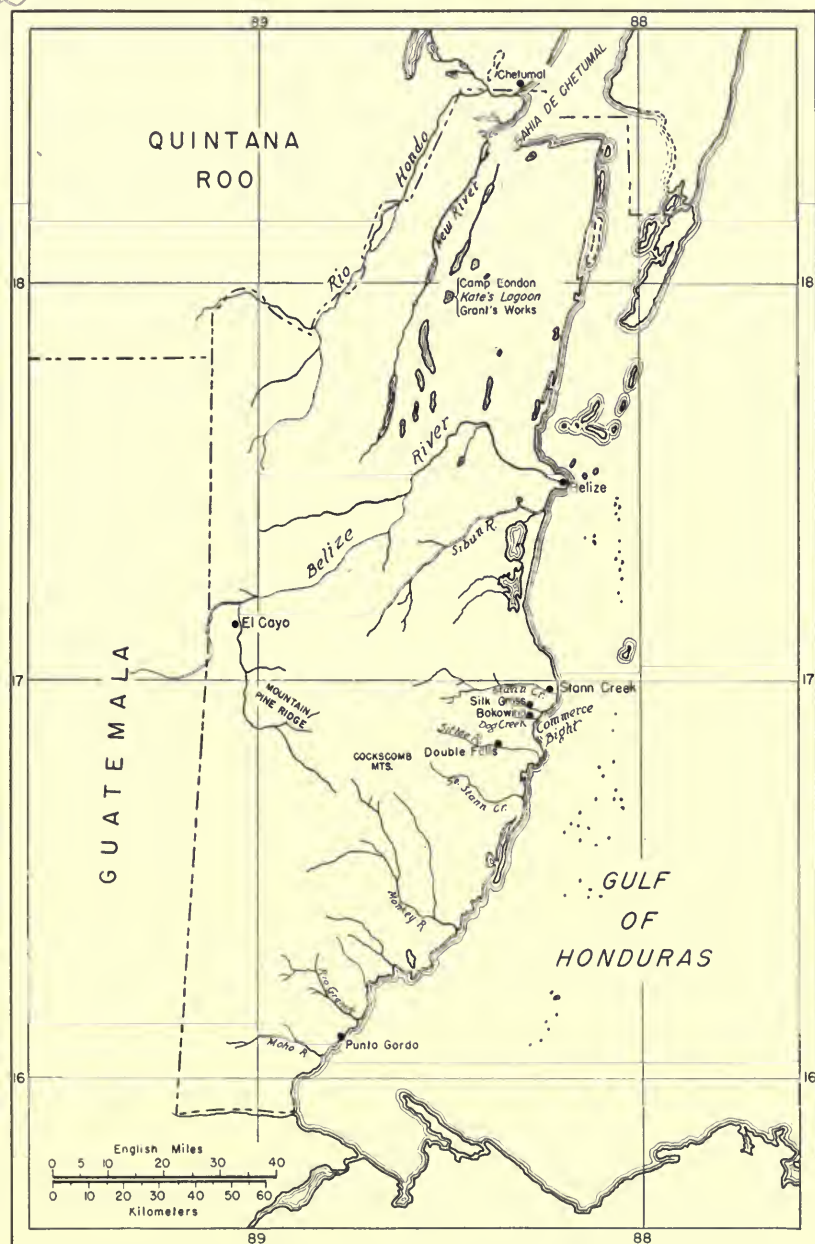


FIG. 127. Map of British Honduras, showing collecting localities.

Type locality.—"That part of California which adjoins to Mexico." Here restricted to Sonora, Mexico.

Specimens collected.—27 (6 skins with skulls, 1 skin only, 3 skeletons only, 10 skulls only, 7 in alcohol).

BRITISH HONDURAS: Belize (B.M., No. 881); Bokowina (B.M., Nos. 942, 974, 975, 980, 982, 989; C.N.H.M., Nos. 935, 946); Silkgrass (B.M., Nos. 2523, 2529, 2543); Double Falls (B.M., No. 2549); Grant's Works (B.M., Nos. 2562, 2563); Stann Creek Valley (B.M., Nos. 2650, 2656; C.N.H.M., No. 2672); Kate's Lagoon (C.N.H.M., No. 2718).

MEXICO: Chetumal, Quintana Roo (B.M., No. 2735); Chichén Itzá, Yucatan (B.M., Nos. 2815, 2931, 2940, 2954); Chiapa, Tuxtla, Chiapas (C.N.H.M., No. 2828).

Remarks.—The genus *Didelphis* is composed of two kinds of opossums. The common black-eared species, *D. marsupialis* Linnaeus, is distributed throughout the tropical zones of South and Central America, abounds in Mexico and the United States, and now is being recorded from southern Canada. The second species, the wholly white-eared *D. azarae* Temminck (*paraguayensis* Allen ex Oken) occurs only in South America, where it is restricted chiefly to the Subtropical and Temperate zones. *D. marsupialis marsupialis* (*etensis* Allen, a synonym) ranges from northern South America into Panama and Costa Rica. From the highlands of Nicaragua northward into Texas, New Mexico, Arizona, and southern California, it is replaced by a slightly paler form for which the earliest available and erstwhile universally applied name is *californica* Bennett.

The extreme limits of the range given here for *californica* are subject to modification. Ostensibly, the existence of a recognizably distinct race intermediate between the saturate Tropical zone *marsupialis* Linnaeus and the pale Temperate zone *virginiana* Kerr (*pigra* Bangs, a synonym) is indicated. Actually, *californica* represents a transitional phase between the two other named races.

Marmosa alstoni nicaraguae Thomas

Marmosa nicaraguae Thomas, 1905, Ann. Mag. Nat. Hist., (7), 16: 313.

Marmosa alstoni alstoni Sanderson, 1941, Living Treasure, p. 171.

Type locality.—Bluefields, Nicaragua.

Specimens collected.—1 (skin with skull).

BRITISH HONDURAS: Double Falls (C.N.H.M., No. 2550).

Marmosa canescens canescens Allen

Didelphis (Micoureus) canescens Allen, 1893, Bull. Amer. Mus. Nat. Hist., 5: 235.

Marmosa gaumeri Osgood, 1913, Proc. Biol. Soc. Washington, 26: 175—type locality, Yaxcaba, southwest of Chichén Itzá, Yucatan.

Type locality.—Santo Domingo de Guzmán, Isthmus of Tehuantepec, Oaxaca, Mexico.

Specimens collected.—1 (skin with skull).

MEXICO: Chichén Itzá, Yucatan (C.N.H.M., No. 2984).

Marmosa mexicana mayensis Osgood

Marmosa mayensis Osgood, 1913, Proc. Biol. Soc. Washington, 26: 176; Sanderson, 1941, Living Treasure, p. 100 and fig. opp.

Marmosa mexicana mayensis Tate, 1933, Bull. Amer. Mus. Nat. Hist., 66: 135—part (not "*Marmosa gaumeri* Gaumer" = *M. canescens*).

Type locality.—Izamal, Yucatan, Mexico.

Specimens collected.—11 (4 skins with skulls, 1 skeleton only, 2 skulls only, 4 in alcohol).

BRITISH HONDURAS: Bokowina (B.M., Nos. 944, 945, 947, 948, 995; C.N.H.M., Nos. 938, 966); Silkgrass (B.M., Nos. 2534, 2540); Stann Creek Valley (B.M., Nos. 2555, 2674).

Marmosa mitis ruatanica Goldman

Marmosa ruatanica Goldman, 1911, Proc. Biol. Soc. Washington, 24: 237.

Marmosa ruatanica ruatanica Tate, 1933, Bull. Amer. Mus. Nat. Hist., 66: 124.

Type locality.—Isla Ruatán, Honduras.

Specimens collected.—2 (1 skull only, 1 in alcohol).

BRITISH HONDURAS: Bokowina (B.M., No. 990); Silkgrass (C.N.H.M., No. 2526).

Remarks.—All forms included by Tate (1933, p. 112) in the "*Mitis* Section" are conspecific. Distinction of *chapmani* from *mitis*, based primarily on size, holds only if old males of the former are compared with females of the latter. The principal character claimed for separating *ruatanica* from *chapmani* and *mitis* is one of purely individual variability in the degree of ossification of the posterior portion of the palate, combined with the amount of damage suffered by the delicate structure during the cleaning process. Another member of the so-called "*Mitis* Section" is the pale *simonsi* from the coast of Ecuador. It grades into the darker "*Marmosa ruatanica*

mimetra" of the humid forests of the northern coast and lower slopes of the Cordillera Occidental in Ecuador. Thus, in addition to *ruatanica*, the subspecies of *M. mitis* include the following subspecies (type localities appended):

Marmosa mitis chapmani Allen—Caura, Trinidad.

Marmosa mitis simonsi Thomas—Puna, Guayas, Ecuador.

Marmosa mitis mimetra Thomas—Santo Domingo de los Colorados, Pichincha, Ecuador.

Marmosa mitis isthmica Goldman—Río Indio, near Gatun, Canal Zone, Panama.

Philander opossum pallidus Allen

Metachirus pallidus Allen, 1901, Bull. Amer. Mus. Nat. Hist., 14: 215.

Type locality.—Greytown, Nicaragua.

Specimens collected.—5 (3 skins with skulls, 2 in alcohol).

BRITISH HONDURAS: Silkgrass (B.M., Nos. 2546, 2734).

MEXICO: Tekom, Yucatan (B.M., No. 2746; C.N.H.M., No. 2745); Chichén Itzá, Yucatan (B.M., No. 2815).

Remarks.—It has been shown (HersHKovitz, 1949, Proc. Biol. Soc. Wash., 62: 11) that *Philander* Tiedemann, 1808, with type *P. virginianus* Tiedemann (= *Didelphis opossum* Linnaeus), is the correct generic name for the four-eyed pouch opossums.

Caluromys derbianus fervidus Thomas

Philander laniger fervidus Thomas, 1913, Ann. Mag. Nat. Hist., (8), 12: 359; Sanderson, 1941, Living Treasure, p. 230.

Caluromys derbianus fervidus Goodwin, 1942, Bull. Amer. Mus. Nat. Hist., 79: 114.

Type locality.—Guatemala.

Specimens collected.—1 (skin with skull).

BRITISH HONDURAS: Kate's Lagoon (C.N.H.M., No. 2704).

Remarks.—Externally, *Caluromys derbianus* is distinguished most readily from its nearest relative *P. lanata* (= *laniger*) by the white, not black, ears.

Cryptotis mayensis Merriam

Blarina mayensis Merriam, 1901, Proc. Washington Acad. Sci., 3: 559.

Type locality.—Chichén Itzá, Yucatan, Mexico.

Specimens collected.—1 (skull only).

MEXICO: Chichén Itzá, Yucatan (C.N.H.M., No. 2960).

Rhynchiscus naso Wied-Neuwied

Vespertilio naso Wied-Neuwied, 1820, *Reise nach Brasiliens*, 1: 251, footnote.

Rhynchiscus naso Sanderson, 1941, *Living Treasure*, p. 239.

Type locality.—Banks of Rio Mucuri, near Morro d'Arara, Minas Geraes, Brazil.

Specimens collected.—1 (skin with skull).

MEXICO: Chetumal, Quintana Roo (B.M., No. 2738).

Saccopteryx bilineata Temminck

Urocryptus bilineatus Temminck, 1838-39, in Van der Hoeven and Vriese, *Tijdschrift Nat. Gesch. en Phisiol.*, Leiden, 5: 33.

Type locality.—Surinam.

Specimens collected.—13 (2 skins with skulls, 11 in alcohol).

BRITISH HONDURAS: Bokowina (B.M., Nos. 960-963, 992, 996); Silkgrass (B.M., Nos. 2503-2505, 2507, 2508, 2519); Kate's Lagoon (B.M., No. 2689).

Peropteryx macrotis macrotis Wagner

Emballonura macrotis Wagner, 1843, *Wiegmann's Arch. Naturg.*, Jahrg. 9, 1: 367.

Type locality.—Matto Grosso, Brazil.

Specimens collected.—23 (in alcohol).

BRITISH HONDURAS: Stann Creek Valley (B.M., Nos. 2595-2616, 2636).

Centronycteris maximiliani centralis Thomas

Centronycteris centralis Thomas, 1912, *Ann. Mag. Nat. Hist.*, (8), 10: 638.

Centronycteris maximiliani centralis Sanborn, 1941, *Field Mus. Nat. Hist.*, Zool. Ser., 27: 372—Double Falls, British Honduras; Sanderson, 1941, *Living Treasure*, p. 172.

Type locality.—Bogava, Chiriquí, Panama.

Specimens collected.—1 (skin with skull).

BRITISH HONDURAS: Double Falls (C.N.H.M., No. 2557).

Chilonycteris rubiginosa fusca Allen

Chilonycteris rubiginosa fusca Allen, 1911, *Bull. Amer. Mus. Nat. Hist.*, 30: 262.

Chilonycteris rubiginosa Sanderson, 1941, *Living Treasure*, p. 227.

Type locality.—Las Quiguas, five miles south of Puerto Cabello, northern Venezuela.

Specimens collected.—5 (2 skins with skulls, 3 in alcohol).

BRITISH HONDURAS: Stann Creek Valley (B.M., Nos. 2592, 2639; C.N.H.M., No. 2640); no locality data (B.M., Nos. 3117, 3119).

Remarks.—Allen's *fusca*, rather than the typical name, is pertinent to the Central American representatives of the species first described from Matto Grosso, Brazil.

Pteronotus davyi fulvus Thomas

Chilonycteris davyi fulvus Thomas, 1892, Ann. Mag. Nat. Hist., (6), 10: 410.

Type locality.—Las Peñas, Jalisco, Mexico.

Specimens collected.—3 (in alcohol).

MEXICO: Chichén Itzá, Yucatan (B.M., Nos. 2924, 3015; C.N. H.M., No. 2923).

Remarks.—Forearm measurements are, respectively, 42.8, 42.8, 44.7 mm.

Micronycteris megalotis mexicana Miller

Micronycteris megalotis mexicana Miller, 1898, Proc. Acad. Nat. Sci. Philadelphia, p. 329.

Type locality.—Plantinar, Jalisco, Mexico.

Specimens collected.—4 (in alcohol).

MEXICO: Tekom, Yucatan (B.M., No. 2791); Chichén Itzá, Yucatan (B.M., Nos. 3002-3004).

Macrotus waterhousii waterhousii Gray

Macrotus waterhousii Gray, 1843, Proc. Zool. Soc. London, p. 21.

Type locality.—Haiti.

Specimens collected.—2 (in alcohol).

HAITI: Daiquini (B.M., No. 876; C.N.H.M., No. 875).

Remarks.—Specific distinction from *M. mexicanus* is doubtful.

Mimon bennettii Gray

Phyllostoma bennettii Gray, 1838, Mag. Zool. Bot., 2: 488.

Type locality.—"South America," here restricted to Ypanema, São Paulo, Brazil (cf. first precise locality record by Thomas, 1902, Ann. Mag. Nat. Hist., (7), 10: 53).

Specimens collected.—2 (in alcohol).

MEXICO: Tekom, Yucatan (B.M., No. 2779; C.N.H.M., No. 2744).

Trachops coffini Goldman

Trachops coffini Goldman, 1925, Proc. Biol. Soc. Washington, 38: 23; Sanborn, 1941, Field Mus. Nat. Hist., Zool. Ser., 27: 374—Belize, British Honduras.

Type locality.—Guayo, Petén, Guatemala.

Specimens collected.—2 (in alcohol).

BRITISH HONDURAS: Belize (B.M., No. 925; C.N.H.M., No. 924).

Glossophaga soricina leachii Gray

Monophyllus leachii Gray, 1844, Voyage of the Sulphur, Zool., 1: 18.

Type locality.—Realejo, Nicaragua.

Specimens collected.—16 (1 skin with skull, 15 in alcohol).

MEXICO: Cuetzala, Yucatan (B.M., Nos. 343, 421); Tekom, Yucatan (B.M., Nos. 2761, 2796); Chichén Itzá, Yucatan (B.M., Nos. 2592, 2786, 2947, 2948, 2985–2988, 3007–3010).

Carollia perspicillata azteca Saussure

Carollia azteca Saussure, 1860, Rev. Mag. Zool., (2), 12: 480.

Carollia sp. Sanderson, 1941, Living Treasure, p. 227.

Type locality.—"Les régions chaudes et tempérées du Mexique." According to Sumichrast (1882, La Nature, 5: 204) this bat was observed in various localities in the states of Oaxaca and Vera Cruz. Hahn (1907, Proc. U. S. Nat. Mus., 22: 113) assumed that specimens from "Rio Tesechoacan, near the town of Perez, in Vera Cruz," are typical. Hence the type locality is here restricted to the lowlands of Vera Cruz, Mexico.

Specimens collected.—32 (in alcohol).

BRITISH HONDURAS: Belize (B.M., Nos. 906–923, 977, 978); Stann Creek Valley (B.M., Nos. 2581–2587, 2589–2591, 2637, 2638).

Carollia subrufa Hahn

Hermiderma subrufum Hahn, 1905, Proc. Biol. Soc. Washington, 18: 247.

Type locality.—Santa Efigenia, a hacienda eight miles northwest of Tepanatepec, southeastern Oaxaca, Mexico.

Specimens collected.—5 (in alcohol).

BRITISH HONDURAS: Bokowina (B.M., No. 958; C.N.H.M., No. 959); Stann Creek Valley (B.M., No. 2588).

MEXICO: Chetumal, Quintana Roo (B.M., No. 2737; C.N.H.M., No. 2736).

Artibeus cinereus phaeotis Miller

Dermanura phaeotis Miller, 1902, Proc. Acad. Nat. Sci. Philadelphia, p. 405.

Artibeus cinereus phaeotis Hershkovitz, 1949, Proc. U. S. Nat. Mus., 99: 449—classification.

Type locality.—Chichén Itzá, Yucatan, Mexico.

Specimens collected.—3 (in alcohol).

MEXICO: Tekom, Yucatan (B.M., Nos. 2778, 2779; C.N.H.M., No. 2771).

Artibeus jamaicensis jamaicensis Leach

Artibeus jamaicensis Leach, 1821, Trans. Linn. Soc. London, 13: 75.

Artibeus jamaicensis jamaicensis Sanderson, 1941, Living Treasure, pp. 18, 28; Hershkovitz, 1949, Proc. U. S. Nat. Mus., 99: 447—comparison with *A. lituratus palmarum*.

Type locality.—Jamaica.

Specimens collected.—18 (in alcohol).

JAMAICA: Constant Springs (B.M., Nos. 846–863).

Remarks.—Forearm length of fourteen adults ranges from 56.2 to 61.2 mm.

Artibeus jamaicensis yucatanicus Allen

Artibeus yucatanicus Allen, 1904, Bull. Amer. Mus. Nat. Hist., 20: 232.

Type locality.—Chichén Itzá, Yucatan, Mexico.

Specimens collected.—1 (in alcohol).

MEXICO: Tekom, Yucatan (C.N.H.M., No. 2770).

Remarks.—Forearm of the single specimen measures 60.1 mm.

Artibeus lituratus palmarum Allen and Chapman

Artibeus palmarum Allen and Chapman, 1897, Bull. Amer. Mus. Nat. Hist., 9: 16.

Artibeus jamaicensis palmarum Andersen, 1908, Proc. Zool. Soc. London, p. 278.

Artibeus sp. Sanderson, 1941, Living Treasure, p. 228.

Artibeus planirostris planirostris Goodwin (nec Spix), 1942, Bull. Amer. Mus. Nat. Hist., 79: 135—listed for Honduras, but no specimens recorded; measurements given are those of *A. literatus*.

Artibeus literatus palmarum Hershkovitz, 1949, Proc. U. S. Nat. Mus., 99: 447—comparison with *A. jamaicensis*.

Type locality.—Trinidad.

Specimens collected.—6 (2 skins with skulls, 4 in alcohol).

BRITISH HONDURAS: Silkgrass (B.M., No. 2531); Stann Creek Valley (B.M., Nos. 2578, 2580; C.N.H.M., No. 2579).

MEXICO: Mérida, Yucatan (B.M., No. 2739); Tekom, Yucatan (C.N.H.M., No. 2769).

Remarks.—Forearm measurements of the specimens from British Honduras are, respectively, 71.7, 63.0, 74.7, 74.7 mm.; of one adult from Yucatan, 65.0.

Desmodus rotundus murinus Wagner

D[esmodus] murinus Wagner, in Schreber's Säugthiere, 1840, Suppl., 1: 377.

Desmodus sp. Sanderson, 1941, Living Treasure, p. 228.

Type locality.—Mexico.

Specimens collected.—23 (in alcohol).

BRITISH HONDURAS: Stann Creek Valley (B.M., No. 2594).

MEXICO: Tekom, Yucatan (B.M., Nos. 2798, 2799); Chichén Itzá, Yucatan (B.M., Nos. 2937–2939, 2943–2945, 2952, 2953, 2959, 2966–2974; C.N.H.M., Nos. 2935, 2936).

Natalus mexicanus Miller

Natalus mexicanus Miller, 1902, Proc. Acad. Nat. Sci. Philadelphia, p. 399.

Type locality.—Santa Anita, Baja California, Mexico.

Specimens collected.—1 (in alcohol).

MEXICO: Chichén Itzá, Yucatan (B.M., No. 3013).

Remarks.—This form may prove to be a small local representative of the South American *Natalus stramineus*.

Myotis nigricans nigricans Schinz

Vesp[ertilio] nigricans Schinz ("P. Max"), 1821, Das Thierreich, 1: 179.

Myotis nigricans Sanderson, 1941, Living Treasure, p. 228.

Type locality.—Fazenda de Aga, near Rio Iritiba, Espirito Santo, Brazil (see Wied-Neuwied, 1826, Beiträge Naturg. Brasil, 2: 268).

Specimens collected.—8 (2 skins with skulls, 6 in alcohol).

BRITISH HONDURAS: Stann Creek Valley (B.M., Nos. 2628–2635).

***Eptesicus fuscus hispaniolae* Miller**

Eptesicus hispaniolae Miller, 1918, Proc. Biol. Soc. Washington, 31: 39; Sanborn, 1941, Field Mus. Nat. Hist., Zool. Ser., 27: 383—Chinchona, Jamaica.

Eptesicus fuscus hispaniolae Shamel, 1945, Proc. Biol. Soc. Washington, 58: 108.

Type locality.—Constanza, Dominican Republic.

Specimens collected.—3 (in alcohol).

JAMAICA: Chinchona (B.M., No. 842; C.N.H.M., No. 843); Sherwood Forest (B.M., No. 864).

***Dasypterus intermedius* H. Allen**

Lasiurus intermedius H. Allen, 1862, Proc. Acad. Nat. Sci. Philadelphia, p. 246.

Type locality.—Matamoros, Tamaulipas, Mexico.

Specimens collected.—1 (in alcohol).

MEXICO: Tekom, Yucatan (B.M., No. 2789).

***Rhogeessa tumida* H. Allen**

R[hogeëssa] tumida H. Allen, 1866, Proc. Acad. Nat. Sci. Philadelphia, p. 286.

Type locality.—Mirador, Veracruz, Mexico.

Specimens collected.—1 (in alcohol).

MEXICO: Tekom, Yucatan (B.M., No. 2762).

***Molossus major verrilli* Allen**

Molossus verrilli Allen, 1908, Bull. Amer. Mus. Nat. Hist., 24: 581.

Type locality.—Samana, Dominican Republic.

Specimens collected.—2 (in alcohol).

HAITI: Petionville (B.M., No. 873; C.N.H.M., No. 874).

Remarks.—This form is doubtfully distinct from typical *Molossus major*. According to Rode (1941, Bull. Mus. Nat. Hist. Nat., Paris, (2), 13: 250) the type of *Molossus obscurus* Geoffroy originated in

the "Antilles" and not, as generally supposed, in Surinam. Accordingly, *obscurus* is certainly an absolute synonym of *major*. Rode (loc. cit.) identified the type as equivalent to *M. rufus*. No doubt this is a lapsus, because the measurements of *obscurus* agree with those of the considerably smaller *major*.

Molossus sinaloae Allen

Molossus sinaloae Allen, 1906, Bull. Amer. Mus. Nat. Hist., 22: 236.

Type locality.—Escuinapa, Sinaloa, Mexico.

Specimens collected.—23 (4 skins with skulls, 19 in alcohol).

BRITISH HONDURAS: Belize (B.M., Nos. 878, 897–901, 928, 949–957); Stann Creek Valley (B.M., Nos. 2621–2623; C.N.H.M., Nos. 2624–2627).

Procyon lotor shufeldti Nelson and Goldman

Procyon lotor shufeldti Nelson and Goldman, 1931, Proc. Biol. Soc. Washington, 44: 17.

Procyon lotor Sanderson, 1941, Living Treasure, p. 76 and fig. opp., p. 254.

Type locality.—La Tuxpeña, Champotón, southeastern Campeche, Mexico.

Specimens collected.—4 (3 skins with skulls, 1 skull only).

BRITISH HONDURAS: No data (B.M., Nos. 885, 2684; C.N.H.M., No. 886).

MEXICO: Tekom, Yucatan (C.N.H.M., No. 2772).

Nasua narica narica Linnaeus

[*Viverra*] *narica* Linnaeus, 1766, Syst. Nat., ed. 12, 1: 64.

Nasua solitaria M. von Neuwied, var. *Mexicana* Weinland, 1860, Zool. Garten, Frankfurt-a-M, 1: 191, col. pl.—type locality near hacienda El Mirador, 20 leagues from Vera Cruz, Mexico, altitude about 4,000 feet above sea level.

Nasua narica bullata Allen, 1904, Bull. Amer. Mus. Nat. Hist., 20: 48, fig. 10, skull—type locality, Pozo Azul, Pirris, Costa Rica.

Nasua narica panamensis Allen, 1904, Bull. Amer. Mus. Nat. Hist., 20: 51, fig. 12, skull—type locality, Boquerón, Chiriquí, Panama.

Nasua narica richmondi Goldman, 1932, Jour. Washington Acad. Sci., 22: 312—type locality, Río Escondido, fifty miles above Bluefields, Nicaragua.

Nasua narica isthmica Goldman, 1942, Proc. Biol. Soc. Washington, 55: 81—type locality, Santa Efigenia, a hacienda eight miles northwest of Tapanatepec, southeastern Oaxaca, Mexico.

Nasua narica Sanderson, 1941, Living Treasure, pp. 186, 205, 206 and fig. opp., pp. 207, 209.

Type locality.—"America"; restricted to Vera Cruz, Mexico, by Allen (1904, Bull. Amer. Mus. Nat. Hist., 20: 51); here further restricted to Achotal, Isthmus of Tehuantepec, Vera Cruz.

Specimens collected.—5 (4 skins with skulls, 1 in alcohol).

BRITISH HONDURAS: Kate's Lagoon (B.M., Nos. 2702, 2720; C.N.H.M., Nos. 2719, 2721); no data (B.M., No. 3108).

Remarks.—Subspecific characterizations of the forms of North American coatis listed above are founded on individual variables. Burt and Hooper (1941, Univ. Michigan Mus. Zool. Occ. Pap., No. 430, p. 2) have pointed out that most of the variation is "attributable to differences in age, sex, and individuals." Regarding color, they concluded that in general it "becomes progressively darker, on the average, from north to south. The specimens from northern Mexico are more pallid and those from Panama the darkest." The sharpest divergence in the color cline appears to take place in the region of the Isthmus of Tehuantepec, Mexico. It is proper, therefore, to restrict the type locality of typical *narica*, generally regarded as a dark form, to the southern part of the state of Vera Cruz. Three specimens at hand from Achotal, Vera Cruz, are quite dark, and four specimens from Reforma, Oaxaca, in the isthmus, average slightly paler. Collectively, they agree with the types and other material representing all described Central American forms. The British Honduras series is dark, on an average, and indicates intergradation between the dark Central American coati and the pale *yucatanicus* (= *nelsoni*?) of Yucatan. *Nasua narica molaris* Merriam described from Colima represents the pale northern Mexican coati. *N. n. pallida* Allen from Chihuahua and *N. n. tamaulipensis* Goldman are synonyms of *molaris*.

Among coatis the great amount of individual polychromatism independent of sex obscures the geographic cline in color and has led to a multiplication in the number of named forms. The dominant color phases are brown and buffy-gray, with individuals molting from one phase to the other. Further complicating the study of geographic variation in color are instances of partial or complete erythrism and melanism, not as fixed individual characters but as transitory pelage phases. Adequate series demonstrate the absolute unreliability of cranial characters for distinguishing any of the described forms from the others.

Potos flavus campechensis Nelson and Goldman

Potos flavus campechensis Nelson and Goldman, 1931, Jour. Washington Acad. Sci., 21: 482.

Potos flavus Sanderson, 1941, Living Treasure, pp. 79, 159 and fig. opp. p. 82.

Type locality.—La Tuxpeña, Champotón, Campeche, Mexico.

Specimens collected.—29 (3 skins with skeletons, 16 skins with skulls, 4 skins only, 4 skulls only, 2 in alcohol).

BRITISH HONDURAS: Bokowina (B.M., Nos. 932, 933, 965, 971–973, 983, 993; C.N.H.M., Nos. 943, 964, 988, 999); Silkgrass (C.N.H.M., Nos. 2502, 2510); Dog Creek (B.M., No. 2509); Double Falls (B.M., Nos. 2547, 2552); Kate's Lagoon (B.M., Nos. 2690, 2691, 2693, 2695, 2700, 2701, 2706; C.N.H.M., Nos. 2692, 2694, 2696, 2697, 2705).

Bassariscus sumichrasti variabilis Peters

Bassariscus variabilis Peters, 1874, Monatsber. k. preuss. Akad. Wissens. Berlin, p. 704.

Jentinkia sumichrasti variabilis Goodwin, 1934, Bull. Amer. Mus. Nat. Hist., 68: 18—Guatemala.

Bassariscus sumichrasti Sanderson, 1941, Living Treasure, p. 160 and fig. opp.

Type locality.—Cobán, Guatemala.

Specimens collected.—1 (skin with skull).

BRITISH HONDURAS: Silkgrass (C.N.H.M., No. 2500).

Mustela frenata perda Merriam

Putorius tropicalis perdus Merriam, 1902, Proc. Biol. Soc. Washington, 15: 67.

Mustela frenata perda Sanderson, 1941, Living Treasure, p. 260 and fig. opp.

Type locality.—Teapa, Tabasco, Mexico.

Specimens collected.—1 (skin with skull).

MEXICO: No data (C.N.H.M., No. 2787).

Lutra annectens latidens Allen

Lutra latidens Allen, 1908, Bull. Amer. Mus. Nat. Hist., 24: 660.

Lutra annectens latidens Pohle, 1919, Arch. Naturg., 9, Abt. A, p. 95.

Type locality.—Lavala, Matagalpa, Nicaragua.

Specimens collected.—1 (in alcohol).

MEXICO.—A small river 40 miles west of Merida, Yucatan (C.N.H.M., no number).

Eira barbara senex Thomas

Galictis barbara senex Thomas, 1900, Ann. Mag. Nat. Hist., (7), 5: 146.

Type locality.—Hacienda Tortugas, Jalapa, Vera Cruz, Mexico.

Specimens collected.—3 (2 skins with skulls, 1 skin only).

BRITISH HONDURAS: Silkgrass (B.M., No. 2541; C.N.H.M., Nos. 930, 2665).

Remarks.—"Tayra" Oken, 1816, is a vernacular name. Apparently, the first valid generic name for the *tayra* or *eyra* is *Eira* (H. Smith, 1842, in Jardine's Naturalist's Library, 13: 201-202).

***Conepatus semistriatus coneptatl* Gmelin**

[*Viverra*] *coneptatl* Gmelin, 1788, Linn. Syst. Nat., ed. 13, 1: 88; Cuvier, 1801, in Azara, Essais Hist. Nat. Quadr. Paraguay, 1: 239, footnote a—synonym of *mapurito* Gmelin (= *semistriatus* Boddaert).

Conepatus tropicalis Merriam, 1902, Proc. Biol. Soc. Washington, 15: 164—type locality, Motzorongo, Vera Cruz, Mexico; Sanderson, 1941, Living Treasure, pp. 210, 263.

Conepatus semistriatus Hershkovitz, 1949, Proc. Biol. Soc. Washington, 62: 15.

Type locality.—"Nova Hispania" (= Mexico); here restricted to Motzorongo, Vera Cruz, Mexico.

Specimens collected.—3 (1 skin with skeleton, 1 skin with skull, 1 skull only).

BRITISH HONDURAS: Stann Creek Valley (B.M., No. 2676; C.N.H.M., No. 2571).

MEXICO: Tekom, Yucatan (B.M., No. 2795).

Remarks.—The "coneptatl" or *onepatl* of Hernandez (1861, Nov. Plant. Anim. Min. Hist. Nat. Mexico, p. 332) is sole basis for the name of the Mexican representative of the common Middle American and northern South American hog-nosed skunk. It should not be confused with the "coneplate" of Buffon (Hist. Nat., 13: pl. 40) which is a *Spilogale*. The Panamanian hog-nosed skunk described by Thomas (1905, Ann. Mag. Nat. Hist., (7), 15: 585), if at all separable, may be known as *Conepatus semistriatus trichurus*.

***Taxidea taxus berlandieri* Baird**

Taxidea berlandieri Baird, 1857, Mamm. North America, p. 205, pl. 39, fig. 1.

Type locality.—Llano Estacado, near boundary of New Mexico, Mexico.

Specimens collected.—1 (skin with skull).

MEXICO: Santa Rosa, Camoa, near Navojoa, Río Mayo, southern Sonora (C.N.H.M., No. 3053).

Urocyon cinereoargenteus fraterculus Elliot

Urocyon cinereo-argentatus (sic) *fraterculus* Elliot, 1896, Field Columbian Mus., Zool. Ser., 1: 80.

Urocyon parvidens Miller, 1899, Proc. Acad. Nat. Sci. Philadelphia, p. 276—type locality, Mérida, Yucatan, Mexico; Goldman, 1938, Jour. Washington Acad. Sci., 28: 495—synonym of *fraterculus*.

Urocyon guatemalae Miller, 1899, Proc. Acad. Nat. Sci. Philadelphia, p. 278—type locality, Nentón, Huehuetenango, Guatemala.

Urocyon cinereoargenteus guatemalae Goodwin, 1942, Bull. Amer. Mus. Nat. Hist., 79: 182.

Urocyon cinereoargenteus Sanderson, 1941, Living Treasure, fig. opp. p. 196, p. 197.

Type locality.—San Felipe, Yucatan, Mexico.

Specimens collected.—10 (1 skin with skeleton, 7 skins with skulls, 1 skin only, 1 skull only).

BRITISH HONDURAS: Belize (B.M., No. 2538); Stann Creek Valley (B.M., No. 2570; C.N.H.M., Nos. 2574, 2575); Camp London (B.M., No. 2683); Kate's Lagoon (B.M., Nos. 2717, 2724, 2732, 2733; C.N.H.M., No. 2716).

Remarks.—Cranial and dental characters attributed to the various described forms of Mexican and Central American gray foxes are trivial and, at best, restricted to the type and possibly some topotypes. Color and, perhaps, size seem to be the only valid distinguishing characters of these wide-ranging foxes. The gray foxes of Yucatan and British Honduras are pale, but slightly more saturate than *scottii* Mearns from Arizona, southern California and northern Mexico. Specimens at hand from Guatemala are hardly darker than the British Honduras series and represent a phase in the geographic cline leading to the distinctly darker *costaricensis* Goodwin. Though the name *fraterculus* is used here, available material from Durango and Chihuahua (*madrensis* Burt and Hooper), from Michoacan and Guerrero (*colimensis* Goldman), and from Oaxaca (*orinomus* Goldman) indicates that possibly all gray foxes from Mexico east into Honduras are referable to *scottii*.

Felis pardalis pardalis Linnaeus

[*Felis*] *pardalis* Linnaeus, 1758, Syst. Nat., ed. 10, 1: 42.

[*Felis pardalis*] Sanderson, 1941, Living Treasure, p. 252.

Type locality.—"America," restricted to Vera Cruz, Mexico, by Allen (1919, Bull. Amer. Mus. Nat. Hist., 41: 345).

Specimens collected.—2 (1 skin, 1 skull).

BRITISH HONDURAS: Sibun River (B.M., No. 2682).

MEXICO: Tekom, Yucatan (C.N.H.M., No. 2748).

***Felis onca goldmani* Mearns**

Felis hernandesii goldmani Mearns, 1901, Proc. Biol. Soc. Washington, 14: 142.

Type locality.—Yohaltun, Campeche, Mexico.

Specimens collected.—1 (skin only).

BRITISH HONDURAS: Punta Gorda (B.M., No. 2681).

***Felis concolor mayensis* Nelson and Goldman**

Felis concolor mayensis Nelson and Goldman, 1929, Jour. Mamm., 10: 350.

[*Felis concolor*] Sanderson, 1941, Living Treasure, p. 197.

Type locality.—La Libertad, Petén, Guatemala.

Specimens collected.—1 (skin with skull).

BRITISH HONDURAS: Commerce Bight (C.N.H.M., No. 2572).

***Herpailurus yagouaroundi cacomitli* Berlandier**

"*Felis cacomitli* Berlandier," Baird, 1857, Mamm. North America, p. 88—
nomen nudum in synonymy of "*Felis yaguarundi* Desm."

Felis cacomitli Berlandier, 1859, in Baird, Rep. U. S. Mexican Boundary Surv.,
2, pt. 2: 12—description and designation of type; Mearns, 1902, Proc.
U. S. Nat. Mus., 24: 207—redescription.

Felis apache Mearns, 1901, Proc. Biol. Soc. Washington, 14: 150—based on
specimen from Matamoros, Tamaulipas, Mexico, described by Berlandier
in Baird, 1859, Rep. U. S. Mexican Boundary Surv., 2, pt. 2: 10.

Felis fossata Mearns, 1901, Proc. Biol. Soc. Washington, 14: 150—type locality,
Mérida, Yucatan, Mexico; Sanderson, 1941, Living Treasure, p. 208 and
fig. opp.

Herpailurus yaguarondi (sic) *cacomitli* Allen, 1919, Bull. Amer. Mus. Nat.
Hist., 41: 381.

Herpailurus yaguarondi (sic) Sanderson, 1941, Living Treasure, p. 209.

Type locality.—Matamoros, Tamaulipas, Mexico.

Specimens collected.—1 (skin only, red phase).

BRITISH HONDURAS: Stann Creek Valley (C.N.H.M., No. 2573).

Remarks.—It has been shown by Bailey (1905, North American Fauna No. 25, p. 167) that *apache* Mearns is nothing else than the red phase of the same species from the same locality as *cacomitli* Berlandier. *Felis fossata* Mearns, based on a skull only of a "youngish-adult female," was originally compared with an erratic descrip-

tion of a *yagouarondi* from an unknown locality, and with the type of *apache*, the skull of which is abnormal. No specific difference between *fossata* and *cacomitli* is apparent and subspecific difference is most unlikely. *Felis yaguarondi* (sic) *tolteca* Thomas (1898, Ann. Mag. Nat. Hist., (7), 1: 41) is included by Allen (1919, p. 381) in the synonymy of *cacomitli*.

The genus *Herpailurus* is monotypic. Two specimens of *yagouarondi*s from Cayenne, in the Paris Museum, were examined and described independently by Fischer (1803, Das Nationalmus. Naturg., Paris, 2: 125) and by Geoffroy (1803, Cat. Mamm. Mus. Hist. Nat., Paris, p. 124). The first author applied the name *Felis y agoua roundi*, and the second, *Felis yagouarondi*. These circumstances require retention of Cayenne, French Guiana, as type locality of the cat first described from Paraguay by Azara (1801, Essais hist. nat. quadr. Paraguay, 1: 171). As the proposed technical names are of even date and that of Fischer's somewhat irregular, it is proper to concede priority to *Felis yagouarondi* Geoffroy. Later authors (Lacépède, Cuvier, Desmarest) have used the same name, though sometimes variously spelled, for representatives of the species, whether from the Guianas, Paraguay or elsewhere in tropical America. Another of Azara's vernacular names for the red color phase of the same cat was sole basis for the binomial *Felis eyra* Fischer (1814, Zoognosia, 3: 228). This then becomes *Herpailurus yagouarondi eyra*, with type locality Paraguay.

***Peromyscus yucatanicus yucatanicus* Allen and Chapman**

Peromyscus yucatanicus Allen and Chapman, 1897, Bull. Amer. Mus. Nat. Hist., 9: 8.

Peromyscus sp. Sanderson, 1941, Living Treasure, pp. 123, 267.

Type locality.—Chichén Itzá, Yucatan, Mexico.

Specimens collected.—1 (skin and skull).

MEXICO: Chichén Itzá, Yucatan (C.N.H.M., No. 2983).

***Sigmodon hispidus microdon* Bailey**

Sigmodon hispidus microdon Bailey, 1902, Proc. Biol. Soc. Washington, 15: 111.

Sigmodon sp. Sanderson, 1941, Living Treasure, p. 266.

Type locality.—Puerto Morelos, Yucatan, Mexico.

Specimens collected.—1 (skin with skull).

MEXICO: Chichén Itzá, Yucatan (C.N.H.M., No. 3006).

Pecari tajacu nelsoni Goldman

Pecari angulatus nelsoni Goldman, 1926, Proc. Biol. Soc. Washington, 39: 48.

Pecari angulatus nigrescens Goldman, 1926, Proc. Biol. Soc. Washington, 39: 49—type locality, Chamelicón, Honduras.

Tagassu tajacu nigrescens Goodwin, 1942, Bull. Amer. Mus. Nat. Hist., 79: 188—Honduras.

Dicotyles tajacu (sic) Sanderson, 1941, Living Treasure, p. 203.

Type locality.—Huehuetán, Chiapas, Mexico.

Specimens collected.—9 (1 skin with skeleton, 5 skins with skulls, 3 skulls only).

BRITISH HONDURAS: Stann Creek Valley (B.M., Nos. 2655, 2677, 2678); Kate's Lagoon (B.M., Nos. 2722, 2723; C.N.H.M., Nos. 2708, 2709).

MEXICO: Tekom, Yucatan (B.M., No. 2785; C.N.H.M., No. 2784).

Remarks.—Collared peccaries within the range assigned by Goldman to *nelsoni* and *nigrescens* are intergrades between the pale Mexican and the dark Central American forms. Some individuals are quite pale, others dark and still others intermediate in coloration. The absence of a distinct dorsal stripe in the types of *nelsoni* and *nigrescens* may be the result of wear, accidental loss of the tips of the long median dorsal hairs, or individual variation. The dark stripe is well defined in all five skins from British Honduras. Size and cranial characters, said to be diagnostic of the named forms in question, are individual variables. The name *nigrescens* is conserved pending further comparisons with *yucatanensis*, skins of which are not at hand.

That the genus *Pecari* Reichenbach is monotypic has been attested since Linnaeus included the Mexican and Brazilian collared peccaries in his description of *Sus tajacu*. Increasing material available for study has had the contrary effect of inducing some authors to apply different names to variable elements of the Linnean species. In addition to *nigrescens* Goldman, the North American forms of collared peccaries stand as follows (type localities appended):

Pecari tajacu angulatus Cope—Guadalupe River, Texas.

Pecari tajacu sonoriensis Mearns—Río San Bernardino, near Monument No. 77, Mexican boundary, Sonora, Mexico.

Pecari tajacu humeralis Merriam—Ameria, Colima, Mexico.

Pecari tajacu crassus Merriam—Metlatoyuca, Puebla, Mexico.

Pecari tajacu yucatanensis Merriam—Tunkas, Yucatan, Mexico.

Pecari tajacu nanus Merriam—Cozumel Island, Yucatan, Mexico; most doubtfully distinct from *yucatanensis*.

Pecari tajacu crusnigrum Bangs—Boquete, Chiriquí, western Panama.

Pecari tajacu bangsi Goldman—Boca de Cupe, eastern Panama.

According to Gaumer (1917, Mam. Yucatan, pp. 65–66) collared peccaries on Cozumel Island (*nanus*) were introduced from the mainland. Those found along the perimeter of the island are persistently hunted by natives and few survive their first two years of life. Peccaries inhabiting the center of the island, however, are less persecuted, hence live longer and attain an average size equal to that of their mainland relatives.

Mazama americana temama Kerr

Cervus temama Kerr, 1792, Anim. Kingd., p. 303—based on the *tema-macame* of Hernandez, 1651, Hist. Nat. Mexico, p. 325.

Mazama tema Rafinesque, 1817, Amer. Monthly Mag., 2: 44—new name for *temama* Kerr.

Mazama sartorii Saussure, 1860, Rev. Mag. Zool., (2), 12: 252—type locality, Mirador, Vera Cruz, Mexico.

Mazama sartorii sartorii Allen, 1915, Bull. Amer. Mus. Nat. Hist., 34: 523–524 (*temama* Kerr, *tema* Rafinesque), 530 (name), 541–542 (synonymy, characters, distribution).

Type locality.—Mexico. Here restricted to Mirador, Vera Cruz.

Specimens collected.—1 (skin and skull).

BRITISH HONDURAS: Bokowina (B.M., No. 931).

Remarks.—Only two species of brockets can be distinguished. These are the red, *M. americana* Erxleben, and the brown, *M. gouazoubira* Fischer (1814, Zoognosia, 3: 465, originally misprinted “gouazoupira”; antedates *simplicicornis* Illiger, 1815, also based on Azara’s *gouazoubira*). Middle American brockets stand as follows (type localities appended):

Mazama americana temama Kerr—Mirador, Vera Cruz, Mexico.

Mazama americana cerasina Hollister—Talamanca, Costa Rica.

Mazama americana reperticia Goldman—Gatun, Canal Zone, Panama.

Mazama gouazoubira pandora Merriam—Tunkas, Yucatan, Mexico.

Mazama gouazoubira permira Kellogg—Pearl Island, Gulf of Panama, Panama.

Odocoileus virginianus yucatanensis Hays

Cervus yucatanensis Hays, 1874, Ann. Lyceum Nat. Hist. New York, 10: 218, pl. 10.

Odocoileus truei Sanderson, 1941, Living Treasure, p. 194 and fig. opp.

Type locality.—Yucatan, Mexico.

Specimens collected.—3 (skulls only).

BRITISH HONDURAS: Belize (C.N.H.M., No. 894); Kate's Lagoon (B.M., Nos. 2710, 2711).

Remarks.—Whatever the characters, the British Honduran Virginia Deer could be assigned indifferently to any one of a half dozen forms described from southern Mexico.

Tamandua tetradactyla mexicana Saussure

Myrmecophaga tamandua(?) Desm. (var. *mexicana*) Saussure, 1860, Rev. Mag. Zool., (2), 12: 9.

Tamandua sp. Sanderson, 1941, Living Treasure, p. 190.

Type locality.—Tabasco, Mexico.

Specimens collected.—6 (1 skin with skeleton, 5 skins with skulls).

BRITISH HONDURAS: Bokowina (C.N.H.M., No. 941); Silkgrass (B.M., No. 2545); Grant's Works (B.M., No. 2566); Stann Creek Valley (B.M., No. 2675); Kate's Lagoon (B.M., No. 2699; C.N.H.M., No. 2728).

Dasybus novemcinctus mexicanus Peters

Dasybus novemcinctus var. *mexicanus* Peters, 1864, Monatsber. k. preuss. Akad. Wissens. Berlin, p. 180.

Dasybus cucurbitinus Gaumer, 1917, Mam. Yucatan, p. 21—in synonymy of *Dasybus novemcinctus*.

Tatusia novemcincta Sanderson, 1941, Living Treasure, pp. 190, 210.

Type locality.—Mexico; restricted to Colima by Bailey (1905, North American Fauna No. 25, p. 52, footnote).

Specimens collected.—11 (1 skin with skull, 10 skulls only).

BRITISH HONDURAS: Belize (B.M., Nos. 892, 2685, 2686); Stann Creek Valley (B.M., Nos. 2576, 2666, 2679, 2680); Silkgrass (B.M., Nos. 2535, 2537; C.N.H.M., No. 2536).

MEXICO: Chichén Itzá, Yucatan (C.N.H.M., No. 3012).

REFERENCES

ALLEN, J. A.

1919. Notes on the synonymy and nomenclature of the smaller spotted cats of tropical America. Bull. Amer. Mus. Nat. Hist., 41: 341-387, 31 figs.

BURT, WILLIAM HENRY

1937. A new pocket gopher (*Heterogeomys*) from British Honduras. Univ. Michigan, Mus. Zool., Occ. Pap., No. 365, 2 pp.

GAUMER, GEORGE F.

1917. Monografía de los mamíferos de Yucatan. Secretaria de Fomento, Mexico, xli+332 pp., 58 pls. +2 unnumbered in frontispiece, map.

GOLDMAN, EDWARD A.

1920. Mammals of Panama. Smithsonian Misc. Coll., 69: 1-309, 24 figs., 39 pls., map.

GOODWIN, GEORGE G.

1934. Mammals collected by A. W. Anthony in Guatemala, 1924-1928. Bull. Amer. Mus. Nat. Hist., 68: 1-60, pls. 1-5.

MURIE, ADOLPH

1935. Mammals from Guatemala and British Honduras. Univ. Michigan, Mus. Zool., Misc. Publ., No. 26, 30 pp., 1 pl., map.

SANBORN, COLIN C.

1941. Descriptions and measurements of neotropical bats. Papers on Mammalogy. Field Mus. Nat. Hist., Zool. Ser., 27: 371-387.

SCHMIDT, KARL P.

1941. The amphibians and reptiles of British Honduras. Field Mus. Nat. Hist., Zool. Ser., 22: 475-510, map.

TATE, G. H. H.

1933. A systematic revision of the marsupial genus *Marmosa*. . . Bull. Amer. Mus. Nat. Hist., 66: 1-250, 26 pls.

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